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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/791,432

03/02/2004

Juergen Benz

588.1016

5411

23280

7590

07/07/2006

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EXAMINER

LE, DAVID D

ART UNIT

PAPER NUMBER

3681

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/791,432	BENZ ET AL.	
	Examiner	Art Unit	
	David D. Le	3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the third Office action on the merits of Application No. 10/791,432, filed on 02 March 2004. Claims 1-22 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:
 - Foreign Priority Document, received on 03/02/04
 - Declaration and Power of Attorney, received on 04/23/04
 - Information Disclosure Statement, received on 10/17/05
 - New Declaration and Power of Attorney, received on 04/07/06

Oath/Declaration

3. The new oath or declaration, filed on 07 April 2006, is approved.

Continued Examination Under 37 CFR 1.114

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07 April 2006 has been entered.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 3 and 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 3 and 20:

- Claims 3 and 20 recite the limitation “wherein the clutch is disengaged to implement the free-wheeling mode when a transmission gear is equal to or less than a maximum free-wheeling gear”. Since the free-wheeling mode is implemented to the presently engaged gear during engine braking mode, it is unclear whether the claimed “a transmission gear” is different from the claimed “a maximum free-wheeling gear”. For the purpose of applying the art rejection, examiner interprets “a transmission gear” is the same as “a maximum free-wheeling gear”.

Claims 18 and 19:

- Claim 18 recites the limitation "the engine braking mode". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. **Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,878,095 to Shigyo.**

Claims 1-22:

Shigyo (Figs. 1-5; column 2, line 21 – column 7, line 4) discloses an automatic-clutch control system of a transmission for a vehicle comprising:

- A drive motor (i.e., column 2, lines 41-42, being the internal combustion engine);
- A manual/automatic transmission (i.e., Fig. 1 and column 4, lines 30-33);
- An automatic clutch (i.e., Fig. 1, element 4) connecting the drive motor and the manual/automatic transmission (i.e., Fig. 1);
- A controller (i.e., Fig. 1, element 31) capable of automatically controlling the manual/automatic transmission;
- Wherein the controller is capable of automatically changing the engine braking mode to a free-wheeling mode (i.e., column 5, line 31 – column 6, line 17);
- Wherein the manual/automatic transmission is a motor vehicle transmission or drive train;

- Wherein the controller is controlling the automatic clutch so as to change from the engine braking mode to a free-wheeling mode (i.e., column 5, line 31 – column 6, line 17);
- Wherein reengaging the clutch when a gas pedal is operated in the free-wheeling mode only when an engine rotational speed is above a transmission input rotational speed (i.e., Fig. 3; column 5, lines 22-30; when S3 is negative determination and the clutch is commanded to fully engaged at S7, which suggests that the operator intends to accelerate the vehicle; and therefore, the engine rotational speed is inherently above a transmission input rotational speed);
- Wherein the automatic clutch is disengaged to implement the free-wheeling mode (i.e., column 5, line 62 – column 6, line 6);
- Wherein the automatic clutch is disengaged to implement the free-wheeling mode when a transmission gear is equal to a maximum free-wheeling gear (i.e., column 6, lines 4-6, when the clutch 4 is completely disengaged and provide a disconnection between the currently engaged transmission gear and the engine);
- Wherein the automatic clutch is disengaged to implement the free-wheeling mode when a gas pedal has not been operated (i.e., column 5, lines 5-12);
- Wherein the automatic clutch is disengaged to implement the free-wheeling mode when an idling switch is activated (i.e., column 5, lines 5-7);
- Wherein the automatic clutch is disengaged to implement the free-wheeling mode when a driver's desired torque is less than zero (i.e., column 5, line 62 – column 6, line 6);

- Wherein the clutch is disengaged to implement the free-wheeling mode when a driving speed is less than the maximum free-wheeling speed (i.e., column 6, lines 7-17; it is inherent that the clutch 4 must be disengaged and the free-wheeling mode must also be implemented when the driving speed is lower than a minimum driveable speed of the presently engaged transmission gear, which is less than the maximum speed that the free-wheeling mode can be implemented for the presently engaged transmission gear, in order to prevent the engine from being stalled);
- Wherein the automatic clutch is disengaged to implement the free-wheeling mode when no downhill/coasting driving is detected (i.e., column 5, lines 5-11);
- Wherein the automatic clutch is disengaged to implement the free-wheeling mode when the manual/automatic transmission is shifted to an automatic driving program (i.e., column 4, line 66 – column 5, line 3);
- Wherein the automatic clutch is disengaged to implement the free-wheeling mode when a creep function is not activated (Shigyo'095 inherently discloses this limitation because it would be impossible to activate the "creep function" when the automatic clutch is completely disengaged);
- Wherein the automatic clutch is disengaged to implement the free-wheeling mode when there is no block of the free-wheeling function (i.e., column 5, line 31 – column 6, line 17; it appears that there is no block in implementing the free-wheeling mode);

- Wherein the change to the free-wheeling mode is blocked when a driving speed is greater than the maximum free-wheeling speed (i.e., column 5, line 37-44, when step S8 is negative and the routine proceeds to step S7);
- Wherein the change to the free-wheeling mode is blocked when no automatic driving program has been activated (i.e., column 4, line 66 – column 5, line 4, when step S2 is negative and the routine proceeds to step S7);
- Wherein the change to the free-wheeling mode is blocked when a hill driving program has been activated (i.e., column 5, lines 5-12, when step S3 is negative and the routine proceeds to step S7);
- Wherein a block of the change to the free-wheeling mode is inherently deactivated when a gas pedal is operated (i.e., column 5, lines 5-12, when step S3 is negative and the routine proceeds to step S7);
- Wherein a block of the change to the free-wheeling mode is inherently deactivated when there is a change from a manual driving program to an automatic driving program (i.e., column 4, line 66 – column 5, line 4); and
- Wherein a block of the change to the free-wheeling mode is inherently deactivated when there is a change in gear with that is less than or equal to a maximum free-wheeling gear (i.e., column 4, lines 45-63).

Response to Arguments

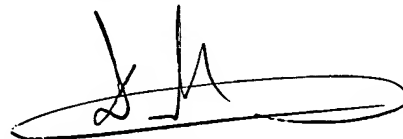
9. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new interpretations of the previously applied reference.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to be 'D. Le', enclosed within a large, horizontal oval loop.

David D. Le
Examiner
Art Unit 3681
07/03/06